AMENDMENTS IN THE CLAIMS

What is claimed is:

Claims 1-15. (Canceled).

Claim 16. (Currently Amended) A chemical oxide film removing method of removing a silicon dioxide film formed on a surface of a workpiece in a processing vessel that can be evacuated, the silicon dioxide film being a chemical oxide film that has been formed by a chemical process using a solution prepared by mixing H_2O_2 and NH_4OH, the chemical oxide film having been formed as a protective film after a removal of a natural oxide film previously formed on the workpiece,

wherein the chemical oxide film is removed under conditions that:

a mixed gas containing HF gas and NH_3 gas is used;

a processing temperature for achieving etch selectivity for the chemical oxide film to silicon is in the range of 200°C to 400°C;

a processing pressure at which the workpiece is processed is in the range of 26 Pa (0.2 Torr) to 53,200 Pa (400 Torr); and

the flow rate ratio of HF gas to NH_3 gas is in the range of 10 : 1 to 1 : 50.

Claim 17. (Currently Amended) A chemical oxide film removing method of removing a silicon dioxide film formed on a surface of a workpiece in a processing vessel that can be evacuated, the silicon dioxide film being a chemical oxide film that has been formed by a chemical process using a solution prepared by mixing H_2O_2 to NH_4OH, the chemical oxide film having been formed as a protective film after a removal of a natural oxide film previously formed on the workpiece,

wherein the chemical oxide film is removed under conditions that:

a mixed gas containing HF gas and NH_3 gas is used;

a processing temperature for achieving etch selectivity for the chemical oxide film to a silicon nitride film is in the range of 200°C to 600°C;

a processing pressure at which the workpiece is processed is not more than 53,200 Pa (400 Torr); and

the flow rate ratio of HF gas to NH_3 gas is in the range of 10 : 1 to 1 : 50.

Claim 18. (Currently Amended) A chemical oxide film removing method of removing a silicon dioxide film formed on a surface of a workpiece in a processing vessel that can be evacuated, the silicon dioxide film being a chemical oxide film that has been formed by a chemical process using a solution prepared by mixing H_2O_2 and NH_4OH, the chemical oxide film having been formed as a protective film after a removal of a natural oxide film previously formed on the workpiece,

wherein the chemical oxide film is removed under conditions that:

a mixed gas containing HF gas and NH_3 gas is used;

a processing temperature for achieving etch selectivity for the chemical oxide film to a silicon dioxide film, which has been formed by CVD (Chemical Vapor Deposition), is in the range of 200°C to 400°C;

a processing pressure at which the workpiece is processed is not more than 53,200 Pa (400 Torr); and

the flow rate ratio of HF gas to NH_3 gas is in the range of 10 : 1 to 1 : 50.

Claim 19. (Currently Amended) A chemical oxide film removing method of removing a silicon dioxide film formed on a surface of a workpiece in a processing vessel that can be evacuated, the silicon dioxide film being a chemical oxide film that has been formed by a chemical process using a solution prepared by mixing H_2O_2 and NH_4OH, the chemical oxide film having been formed as a protective film after a removal of a natural oxide film previously formed on the workpiece,

wherein the chemical oxide film is removed under conditions that:

a mixed gas containing HF gas and NH_3 gas is used;

a processing temperature for achieving etch selectivity for the chemical oxide film to a thermal oxide film is in the range of 100 °C to 600 °C;

a processing pressure at which the workpiece is processed is not more than 53,200 Pa (400 Torr); and

the flow rate ratio of HF gas to NH_3 gas is in the range of 10 : 1 to 1 : 50.